

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

11-03-2005

Applicant's or agent's file reference
1112/PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/SE2004/001855

International filing date (day/month/year)

14.12.2004

Priority date (day/month/year)

17.12.2003

International Patent Classification (IPC) or both national classification and IPC

B30B 15/06, B30B 1/32

Applicant

Automation Presses Tooling AP&T AB et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Form PCT/ISA/237 (cover sheet) (January 2004)

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International application No.

PCT/SE2004/001855

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language, _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims	12	NO
Inventive step (IS)	Claims		YES
	Claims	1-12	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations:

Most relevant documents cited in the International Search Report

D1: US 2003188643 A1
 D2: DE 10043030 A1
 D3: DE 1703297 A1
 D4: DE 19937694 A1

Explanation

The invention relates to an apparatus for compensating for such deformations as occur on operation in first and second clamping surfaces intended for a tool in a press. The invention also relates to a method for compensating for stress deformations in work surfaces in a press apparatus. The object of the present invention is to realise an apparatus which is flexible and which can compensate for deformations by bulging outwards and thereby realising a compensation for deformations so that a more uniform compression depth is attained in a tool which is placed in a press in which the present invention has been disposed.

D1 (see paragraphs [0035]-[0044] and figs. 1-4, 6 and 7) discloses a press with a pressure compensating device. The press comprises an upper press platen 16 which is vertically movable and a lower fixed press platen 17. A pressure plate 15 (corresponding to a tool part in the application) is mounted on each pressure platen 16,17 via a pressure compensating hydraulic cushion 1 (corresponding to the power unit in the application). The hydraulic cushion 1 is

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: Box V

constructed from an upper cover 2, a lower cover 3 and a lateral edge closure 4 which together surround a pressure-tight inner space 5 filled with a hydraulic medium. The edge closure may be a metal sheet of U-shaped cross section and be welded to the upper 2 and lower 3 parts. The U-shaped part of the edge closure can be said to form a groove (see e.g. fig. 7). As is evident from figs. 2-4 the upper and lower parts 2,3 can be separated by providing the space 5 with a hydraulic medium through a hole in the upper part 2.

D2 (see paragraphs [0004] and [0005] and fig. 2) discloses a press that comprises a device for optimal pressure distribution, which is achieved by several plungers 13 and cylinders 14 mounted between a ram 3 and a press plate 5.

D3 (see page 7, last paragraph-page 9, first paragraph and figs. 1 and 2) discloses a press with plungers 10 for achieving even pressure distribution.

D4 discloses a further example of a press with a device for achieving even pressure distribution. The device is arranged on a lower platen 5. According to one embodiment (see fig. 2) the platen is provided with space 11 where a pressure distribution plate 10 is received. The plate 10 is covered with a membrane which is welded to the platen 5. A press plate 8 is mounted above the membrane. According to an alternative embodiment (see column 2, lines 38-42) the plate 10 may be surrounded by a steel frame. The steel frame and the membrane can be fastened to the plate by screwing or welding.

Claim 12

The method according to independent claim 12 is considered known from either of D1-D4 and therefore lacks novelty.

Claim 1

The apparatus according to claim 1 appears to differ from D1 in that both clamping surfaces mentioned in claim 1 are movable. In D1 only one of the corresponding surfaces are movable. However, it appears obvious to the person skilled

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in the art to realise that also the lower press platen 17 can be made movable.

Furthermore, it is questioned in what way the clamping surfaces in claim 1 defines the invented apparatus (20) for compensating deformations. As is apparent from the application the invented apparatus (20) is a part of a press and this part is shown, e.g., in fig. 5 in the application.

Having regard to the arguments above the apparatus according to claim 1 lacks at least inventive step over D1.

The apparatus according to claim 1 is also considered to lack inventive step over either of D2-D4.

Claims 2-11

The apparatus according to the wording of claims 2-11 is considered obvious to the person skilled in the art and therefore lacks inventive step.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawing or on the question whether the claim are fully supported by the description, are made:

Claim 12

Claim 12 does not appear to be clear and concise and therefore contradicts PCT Article 6.